

## ABSTRACT OF THE DISCLOSURE

An orthopedic knee brace provides an apparatus for accurately prescribing the anatomical motion of the human knee. The orthopedic knee brace is used for treatment and rehabilitation following surgery to the knee, protection for a surgically repaired knee, and protection for an uninjured knee, among other applications. The orthopedic knee brace actively prescribes asymmetric three-dimensional anatomic motion in six degrees of freedom of the wearer's knee. The rigid connections between the thigh and calf engaging members and the medial and lateral hinges provide the ability of the orthopedic knee brace to prescribe asymmetric three-dimensional anatomic motion in six degrees of freedom by actively prescribing flexion and extension, abduction and adduction, internal/external rotation, anterior/posterior translation, medial/lateral translation, and proximal/distal translation between a femur and a tibia of a wearer's leg. In alternate embodiments a single-hinge brace design is provided for treatment and prevention of osteoarthritis and other joint diseases and conditions.